Glossary Of InRoads Terms

ALG An ALG is a file containing horizontal and vertical alignments, coordinate geometry information and superelevation for a specific Geometry Project. This file can be accessed using VB, C++ or MDL.
Alignment An alignment is a chain of tangents, curves, and transition spirals that describes a centerline.
Backbone The backbone is a portion of the corridor that lies between the template hinge points. The backbone is typically the roadway template excluding the side slopes.
Batch mode Geometry commands can be run in batch mode, and coordinate geometry commands are entered into the software using an Input File.
Breakline A breakline is a surface feature consisting of a collection of spatial coordinates that have an implied linear relationship. No triangle side (in the triangulated surface) can cross over a breakline.
Chainage Chainage is the distance along a horizontal alignment measured from some reference point on the alignment. Also referred to as station.
Clipping boundary A clipping boundary is an element that defines the size and shape of a reference file (model file) view.
COGO COGO within InRoads typically refers to basic geometric commands for defining horizontal geometric data. This typically refers to locate, intersect, traverse and create commands for individual or joined groups of points.
Component A single tangent or curved section of an alignment. Each component in an alignment is defined by a unique set of geometry parameters. The component editor allows users to assemble arcs, spirals and tangents into a combination of fixed, floating and free elements that form an alignment.
Cross section A cross section is a graph showing surface elevation extracted perpendicular to a defined path (such as a centerline). Cross sections can display surface features such as utilities, drainage, and curbs.
Decision table A decision table consists of a list of records, each defining a line segment by slope and width, used to model terrain. The decision table is a logical set of conditions allowing the design to be based upon a series of if, then, else conditions. Decision tables may target surfaces, alignments, elevations or features. Decision tables may be attached to templates, alignments or MicroStation graphics.
DTM A digital terrain model is a database within a project that defines a 3D mathematical model of the shape of a surface. The represented surface may be an existing terrain, proposed grade surfaces, or a combination of both. The DTM includes random points, breaklines, interior and exterior limits. The DTM may also include non-triangulated features such as signs, fence lines, culverts, etc. for display in plan, profile and cross section views.

Element Elements are the basic building blocks of a geometric figure; also completed geometric figures such as lines, shapes, circles, and so forth.
Event point An event point is a specific, named location along a horizontal or vertical alignment. Event points are used to indicate significant stations. Some commands that perform a task at regular intervals or at even stations can perform that task also at event points. For example, cross sections can be extracted every 50 feet AND at stations corresponding to event points.
Geometry style The Geometry Style Manager applies labels to points, lines, arcs or spirals.
Feature A feature is a single instance of a 3D geometric representation in the Digital Terrain Model (DTM). A feature can be one of five types, corresponding to the type of DTM points contained: random, breakline, exterior boundary, interior boundary, or contour. Features are groups of DTM points -- each group is given a name and assigned a feature style. Benefits to organizing the DTM into features include the ability to identify different features by name, select and edit them using filters and independently control their display characteristics. Features can also be targets for design decisions in templates and decision tables.
Feature style A feature style is assigned to individual features to determine whether points, line segments, or annotation for that feature can be displayed in plan view, in cross sections, or in profiles. Feature styles can also be used in filters for grouping in display and editing. Within the survey environment Feature code and feature style are synonymous.
Figure A figure is a sequence of coordinate geometry point numbers that represents an alignment.
Fixity Fixity defines the degree of flexibility for template segments. The segments can be fixed with horizontal width and slope, or configured by variable slopes or widths.
Isopach An isopach surface contains data derived from two other surfaces. The isopach data is obtained by subtracting the elevations in one surface from those in the other surface.
Hinge The hinge is one of two points on a template that define the backbone of a template. It is the point by which end conditions such as decision tables and slope conditions 'hinge' about. The Pivot Point in InRoads is analogous to CAiCE's hinge point.
Horizontal and vertical controls Horizontal and vertical controls are points that can be used to govern a transition control point. They force a template control point to follow a horizontal and/or vertical alignment or DTM feature other than the ones controlling the centerline.
Linestring A linestring is an open graphic element composed of up to 5012 line segments connected at the vertices.
Material table A material table defines different cut-slope values for different surface materials. Every DTM can be assigned a surface material.
Parcel InRoads does not distinguish between Parcels and Alignments and generally treats parcels as alignments. The only exceptions to this rule are specific commands developed for lot (parcel) creation and ROW takes. Even then, the information is stored as alignments.

Pen order Pen order is the sequence of pen up/pen down control information in the ASCII file. If the pen order is set to One then Zeroes, a 1 in the last column in the ASCII file represents the beginning of a line, and 0 represents points on the line. The opposite is true of the setting Zero then Ones.
Plan And Profile Generator The Plan and Profile Generator automatically generates plan views and profile views, assembles the alignment-based sheets, and then stores their definitions in an ASCII file called the View Definition File (VDF).
Planimetric lines Planimetric lines are a series of graphical representations of where cross sections and profiles were extracted. These can be created in MicroStation or InRoads and can be edited to represent custom cross sections with multiple vertexes.
Profile grade line The profile grade line is established from a horizontal and a vertical alignment. The typical section is applied at the profile grade line using the defined widths and slopes in the template.
Profile A profile is a graph showing elevation extracted from one or more surfaces along a defined path, such as along an alignment. Vertical alignments are also defined within the Profile view.
Project A project is a collection of surfaces, geometry projects, template libraries, roadway libraries, drainage databases, survey fieldbooks and preferences files, all identified in a single file with an RWK extension. The RWK file is in ASCII format and allows users to save a group of files with file location pointers.
Random One type of point used to define a digital terrain model. Random points are discrete points that have no relation to other points. They are sometimes referred to as *regular points*, spot heights, or *mass points*.
Regression analysis This is a method in which a best fit line or arc is developed through a series of points.
Rollover The difference in slope between the road and the shoulder during superelevation.
Running speed Typically from 83% to 100% of the design speed.
RWK A project file containing the paths to the surfaces (DTM), typical section libraries (TML), coordinate geometry projects (ALG files), roadway libraries (RWL), drainage databases, survey fieldbooks and preference files related to a particular project. There is a distinction between a project and a geometry project - a project can contain one or more geometry projects.
RWL A roadway library file, containing roadway modeling definitions. This file stores station and typical section information used by the Roadway Modeler command to create surface models along a horizontal alignment.
Segment A portion of a typical section, such as a template or a decision table, defined by slope and width.
Spot heights Similar to regular points. A distinction is made in input and display options to establish the special nature of this feature. Usually spot heights represent local minimums or maximums in the terrain.

Tag Additional information that may be attached to graphical elements to provide more intelligence to the graphical elements. Tags may be applied manually within MicroStation or automatically within InRoads.
Template A template is a cross section of the design surface showing special features such as the median and drainage ditches. Templates can be saved in the typical section library. A template library stores definitions for templates, cut and fill tables, material tables, decision tables and transitional control features.
TML A typical section library file.
Transition control codes Transition control codes are assigned to each point in a template. They can define custom transitions, independent controls and transition control lines.
Vertical alignment A vertical alignment is a child of the horizontal alignment. It typically contains vertical definition via VPI's and curve definitions. The vertical alignment is stored in the ALG file with horizontal alignments and other geometric definitions.